

Serial No. 10/092,746

Page 7 of 11

Remarks

Claims 1, 3-10, 12-14, 16 and 18-20 are pending in the application.

Claims 1, 3-10, and 12-14, 16 and 18-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Maddocks U.S. Patent 6,483,616 B1, hereinafter "Maddocks" in view of U.S. Rowley U.S. Patent 4,833,668, hereinafter "Rowley".

Each of the various rejections is overcome by various amendments and arguments that are presented.

Any amendments to any claim for reasons other than as expressly recited herein as being for the purpose of distinguishing such claim from known prior art are not being made with an intent to change in any way the literal scope of such claims or the range of equivalents for such claims. They are being made simply to present language that is better in conformance with the form requirements of Title 35 of the United States Code or is simply clearer and easier to understand than the originally presented language. Any amendments to any claim expressly made in order to distinguish such claim from known prior art are being made only with an intent to change the literal scope of such claim in the most minimal way, i.e., to just avoid the prior art in a way that leaves the claim novel and not obvious in view of the cited prior art, and no equivalent of any subject matter remaining in the claim is intended to be surrendered.

Also, since a dependent claim inherently includes the recitations of the claim or chain of claims from which it depends, it is submitted that the scope and content of any dependent claims that have been herein rewritten in independent form is exactly the same as the scope and content of those claims prior to having been rewritten in independent form. That is, although by convention such rewritten claims are labeled herein as having been "amended," it is submitted that only the format, and not the content, of these claims has been changed. This is true whether a dependent claim has been rewritten to expressly include the limitations of those claims on which it formerly depended or whether an independent claim has been rewriting to include the limitations of claims that previously depended from it. Thus, by such rewriting no equivalent of any subject matter of the

569436-1

Serial No. 10/092,746

Page 8 of 11

original dependent claim is intended to be surrendered. If the Examiner is of a different view, he is respectfully requested to so indicate.

Rejections Under 35 U.S.C. §103(a)

Claims 1, 3-10 and 12-14, 16 and 18-20

Claims 1, 3-10, and 12-14, 16 and 18-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Maddocks in view of Rowley.

The rejection is traversed.

The office action presents arguments that rely on Maddocks teaching "counter-propagating supervisory signal." The arguments are moot, because Maddocks does not teach a "counter-propagating supervisory signal", but a co-propagating supervisory channel.

The co-propagating nature of the Maddocks supervisory channel is expressly established with Maddocks being described as "an optical communications system includes a transmitter and a receiver linked by a light guide, means for transmitting a traffic-carrying optical channel, and a supervisory optical channel along said light guide" (col. 1, lines 28-32, emphasis added). Maddocks then clearly details the origination of his supervisory signal at the transmit end of his system side, and its path in the direction of propagation toward the receive end of the system, with "a relatively low power supervisory channel signal is generated at supervisory insert unit 9...and is added to the fiber 5 by optical coupler 30 (drawing, col. 2, lines 33-36), followed by describing it arriving at the receive end with "at the switching unit 2, the supervisory channel is extracted by optical coupler 31 and passed to extract unit 10" (drawing, col. 2, lines 47-48). The direction of propagation for the supervisory channel is clearly in the same forward direction as optical amplifiers 8 and 11, and hence, the transmitted pass-band signal. Therefore, the supervisory signal of Maddocks is definitely not "counter-propagating," and the arguments of the office action based on that notion can not be substantiated.

The office action further suggests that Rowley teaches the "counter-propagating supervisory signal." This too is incorrect.

569436-1

Serial No. 10/092,746
Page 9 of 11

The office action states Rowley teaches the counter-propagating supervisory channel with:

...data transmitted on the A channel from station 1 travels in an inverted form on the duplex link 3 and is reinverted at the receiving end by inverter 11. Supervisory fault and error detector 16 carries out normal fault checks, including checks of the frame alignment signal, supervisory checks and checks for faults in line code. Data on channel B is transmitted by transmitter 14 at station 13 in univerted format and is received by receiver 15 at station 12. Detector 16 checks for faults (col. 5, lines 27-36).

This above passage, as well as Rowley in its entirety, does not disclose a counter-propagating supervisory channel, or even a supervisory "channel" at all.

The invention of Rowley functions on the basis that "data transmitted from one end is inverted prior to transmission and reinverted at the receiving end, while information from the other end is transmitted without inversion...if there is a break, the stations at both ends will receive inverted data (*due to reflections occurring at the break point in the optical channel*) and the fault is quickly revealed" (Abstract, parenthesized/italicized comments added). The term "inverted" refers to the logic state of digitally encoded baseband data being reversed before it undergoes modulation and transmission; it has nothing to do with direction of propagation. Rowley's "supervisory and error detector circuits" (fig. 2) reside after receivers 15 and 15', functioning fully in the digital domain, and digitally monitoring for discrepancies *only* in the encoded data signal. There is no separate supervisory *channel*, "counter-propagating" or otherwise. Therefore, like Maddocks, Rowley does not teach that claim element either.

In view of the above, the applicant submits that independent claims 1, 10, 16 and 20 fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

Claims 3-9, 12-14 and 18-19 depend, either directly or indirectly, from independent claims 1, 10 and 16 and recite additional features thereof. As such, and at least for the same reasons set forth above with respect to Applicants' independent claims

569436-1

Serial No. 10/092,746

Page 10 of 11

1, 10 and 16, Applicants submit that these claims also fully satisfy the requirements of under 35 U.S.C. §103 and are patentable thereunder.

Therefore, claims 1, 3-10 and 12-14, 16 and 18-20 are allowable over Maddocks in view of Rowley under 35 U.S.C. §103. As such, Applicants respectfully request that the rejection be withdrawn.

569436-1

Serial No. 10/092,746

Page 11 of 11

Conclusion

It is respectfully submitted that the Office Action's rejections have been overcome and that this application is now in condition for allowance. Reconsideration and allowance are, therefore, respectfully solicited.

If, however, the Examiner still believes that there are unresolved issues, the Examiner is invited to call Eamon Wall at (732) 530-9404 so that arrangements may be made to discuss and resolve any such issues.

Respectfully,

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569436-1